AF$

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Patent Application of:	Docket No.: 42390.P7987
Lynice S. SPANGLER et al.	
Serial No.: 09/541,390	Group Art Unit: 2155
Filed: March 31, 2000	Examiner: Laing Che A. Wang
For: **TECHNIQUES OF UTILIZING ACTUALLY UNUSED BANDWIDTH**	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. §41.37 (a)

Sir:

Appellants have filed a timely Notice of Appeal from the Final Office Action, on October 8, 2004. A single copy of this brief is provided pursuant to 35 U.S.C. § 41.37(a).

If additional extensions of time are necessary, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including any additional fees for filing of the Appeal Brief) are hereby authorized to be charged, or overpayment credited, to Intel Corporation's Deposit Account 50-0221.

REAL PARTY IN INTEREST

The real party in interest in this appeal is Intel Corporation, assignee of the entire interest in the above-identified application.

RELATED APPEALS AND INTERFERENCES

The subject matter of the present application was <u>previously appealed in Appeal Brief filed November 13, 2003</u>. In response that that Appeal Brief, the Examiner Reopened Prosecution on the merits in an Office Action mailed on January 16, 2004. <u>This is thus the second time this application as been brought to the Board</u>. The Board has however never rendered a decision.

The above notwithstanding, the Appellants, their legal representatives and the Assignee are not currently aware of any pending appeal that may directly affect or be indirectly affected by or have some bearing on the Board's decision in this appeal. Attached hereto is a Related Proceedings Appendix showing no related appeals or interferences.

STATUS OF THE CLAIMS

Claims 1, 3, 5-8, 10, 12-15, 17, and 19-20 are currently pending.

Claims 1, 3, 5-8, 10, 12-15, 17, and 19-20 are currently rejected.

Claims 1, 3, 5-8, 10, 12-15, 17, and 19-20 are the subject of this appeal.

Claims 2, 4, 9, 11, 16, 18, and 21-24 have been cancelled.

No claims have been withdrawn or allowed. The claims in issue are attached in

the "Claims Appendix" attached herewith.

STATUS OF AMENDMENTS

All prior amendments to the application have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

Briefly, embodiments of the present invention relate to a method and apparatus for

maximizing bandwidth usage. A determination is made whether information scheduled to be

broadcast is utilizing all bandwidth previous allocated to broadcasting the information, and if not,

additional information is broadcast using an unused portion of the previously allocated bandwidth.

As shown for Example in Figure 2, and explained on pages 3 and 4 of the application if the

management system 8 determines 100 that the total bandwidth available to it is being used, the

management system 8 waits 105 for a specified period before again determining, whether the total

bandwidth continues to be used. The management system 8 cycles through repeated determinations

until a portion of the total bandwidth becomes available for another use.

If bandwidth becomes available, the management system 8 determines 110 whether the

available bandwidth is allocated or unallocated. Figure 3, which shows an exemplary schedule of

allocated events, illustrates the distinction between allocated and unallocated bandwidth types. In

Figure 2, various events appear as rectangular blocks. In this simplified case, each program

occupies a fixed amount of bandwidth for a given length of time. For instance, Program 2, is an

event that has been scheduled or guaranteed to occupy 2Mbps from 10:00 AM until 12:00 PM.

Thus, Program 2 has been allocated 2Mbps of bandwidth for a duration of 2 hours. Located to the

upper right of the Program 2 rectangle lies a block denoted Opportunistic Bandwidth. Between

11:00 AM and 12:00 PM no events have been scheduled to occupy the bandwidth between 10 Mbps

and 12 Mbps.

Returning to Figure 2, if management system 8 determines that there is unallocated

bandwidth in the bandwidth pipe, it chooses 115 opportunistic content that is able to fit into the

unoccupied bandwidth for the proper duration, and delivers it to the bandwidth pipe 60 for

broadcasting.

Independent Claim 1

The invention recited by claim 1 is directed to a method comprising:

determining in real time whether information guaranteed a fixed amount of

bandwidth for a fixed length of time broadcast digitally, is actually utilizing all

bandwidth previously allocated to broadcasting the information **[page 4, lines 24 et seq.]**;

if not, broadcasting additional information using an unused portion of the

previously allocated bandwidth **[page 5, lines 1-5 where "additional bandwidth" is**

referred to a "opportunistic bandwidth; Figure 2, item 115];

limiting the amount of additional information to a preset percentage of the total

available bandwidth **[page 5, lines 14-15; Figure 2, item 130]**,

wherein said broadcasting of a portion of the additional information is stopped

when the preset percentage is reached **[page 6, line 5; Figure 2, item 140]**.

Independent Claim 8

Independent claim 8 recites a digital communication system [**Figure 4**] comprising:

an automated management system that controls scheduling of digital broadcasts [**Figure 4, system items 8, 10, 20, 30, and 40, page 6, lines 19 et seq.**] and is configured to determine in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast actually utilizes all bandwidth previously allocated to broadcasting the information [**page 4, lines 24 et seq.**], and if not, to broadcast additional information using an unused portion of the previously allocated bandwidth [**page 5, lines 1-5 where "additional bandwidth" is referred to a "opportunistic bandwidth; Figure 2, item 115**],

wherein the automated management system is configured to limit the amount of additional information to a preset percentage of the total available bandwidth [**page 5, lines 14-15; Figure 2, item 130**],

wherein the automated management system is configured to stop the broadcast of a portion of the additional information when the preset percentage is reached [**page 6, line 5; Figure 2, item 140**].

Independent Claim 15

Independent claim 15 is a "Beauregard" claim similar to claim 1 recited above. Claim 15 recites: An article comprising a computer-readable medium which stores computer-executable instructions for causing a computer system to **[page 15, lines 12-23]**:

determine in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast over a digital network is actually utilizing all bandwidth previously allocated to broadcasting the information **[page 4, lines 24 et seq.]**;

if not, broadcast additional information using an unused portion of the previously allocated bandwidth **[page 5, lines 1-5 where "additional bandwidth" is referred to a "opportunistic bandwidth; Figure 2, item 115]**;

limit the amount of additional information to a preset percentage of the available bandwidth **[page 5, lines 14-15; Figure 2, item 130]**; and

stop broadcasting a portion of additional information when the preset percentage is reached **[page 6, line 5; Figure 2, item 140]**.

GROUNDS OF REJECTION TO BE
REVIEWED ON APPEAL

The final Office Action dated May 13, 2004 set forth two separate grounds of rejection, the first based on Aras in view of Ahn, and the second ground based on Aras and Ahn, in view of Yin. In the amendment after final filed on August 2, 2004, claims in

the second ground of rejection were incorporated into the independent claims and

entered. Thus, it is believed that the sole ground of rejection remaining is as follows:

1. All claims stand rejected under 35 U.S.C. §103(a) as being unpatentable in

view of U.S. Patent 5, 884,037 to Aras et al. (**Aras**) in view of U.S. Patent 5,745,642 to

Ahn, further in view of U.S. Patent 6,442,138 to **Yin**.

ARGUMENT

REJECTION UNDER 35 U.S.C. 103(a)
Claims 1, 3, 5-8, 10, 12-15, 17, and 19-20

Appellants appeal the rejection of all pending claims, which is based on the

Examiner's position that the claimed invention is obvious in view of Aras, Ahn and Yin.

In the Advisory Action dated October 4, 2004, the Examiner succinctly restated

his rejection argument as:

"In this case, Aras has taught determining whether information is fully utilized as

broadcasting additional information using an unused portion of the previously allocated

bandwidth... and Ahn has suggested the determination could be made in real time..., it

would allow Aras to fully utilize the communication rate of network as suggested by

Ahn..., and Yin is showing the bandwidth could be a indicated as a percentage".

As a matter of law, the prior art rejections are in error and are made through the Examiner's impermissible use of hindsight gained by knowledge of Appellant's invention. Indeed, as discussed below, the rejections are made through a misapplication of the law. Further, as a matter of fact, the Examiner's analysis of the references with regard to the claimed invention is fatally flawed and erroneous for the reasons given below.

A. The Prior Art

U.S. Patent 5,884,037 to Aras:

Aras appears to be directed to a reservation bandwidth system for allocation of network resources using an autoregressive integrated moving average method. The bandwidth predicting algorithm utilizes an autoregressive integrated moving average trend analysis to <u>forecast future values of bandwidth</u> capacity at a link or system level used by elements that do not conform to a reservation policy. The bandwidth <u>predictor</u> may utilize a utility that analyzes the bandwidth utilization trend over a previous period of time and generates appropriate seasonal coefficients to be used by the predictor algorithm.

As stated in the last lines of column 2 through the top of column 3, "To improve bandwidth management, the present invention uses seasonal Autoregressive Integrated Moving Average ("ARIMA") trend analysis to enhance reservation-based management systems. Seasonal ARIMA models provide a flexible means of forecasting future values of a variable based solely on the periodicity of the past occurrences. The periodic version

of the ARIMA model is used because established networks generally have utilization

curves that demonstrate strong seasonal tendencies. The present invention includes the

following components: a static model generation utility ("SMGU") and a non-conforming

bandwidth predictor ("NCBP").

The SMGU is an off-line utility that analyzes the bandwidth utilization trend over

the previous period of time and generates the appropriate seasonal ARIMA coefficients to

be used by the bandwidth predictor" (emphasis added).

Thus, Aras appears to be concerned with ways to <u>forecast or predict future</u>

<u>bandwidth availability based on current and past trends</u>.

U.S. Patent 5,745,642 to Ahn:

The Examiner has additionally relied on Ahn in combination with Aras. Ahn is

used for teaching determining in real time whether information guaranteed a fixed

amount of bandwidth for a fixed length of time broadcast digitally is actually utilizing all

bandwidth.

Ahn appears to be directed to a system to interleave "resource data" into unused

bandwidth of a digital movie. However, Ahn does not determine in real time "<u>whether</u>

<u>information guaranteed a fixed amount of bandwidth for a fixed length of time</u>" (as

claimed) is using all of it allocated bandwidth. The claimed phrase "fixed amount... for a

fixed length of time" refers to **scheduling [see page 4, line 7 of application]**. The

scheduled information or programming is clearly illustrated in **Figure 3** of the application.

In contrast, Ahn merely looks at each frame of information to determine if room is left over to add additional data. [**See for example Ahn's abstract, line 10, wherein it states** *"the present invention involves interleaving resource data that is not used in the current frame"*].

This is unrelated to Appellant's claimed invention

U.S. Patent 6,442,138 to Yin:

The Examiner has acknowledged that Aras and Ahn do not teach that a stop limit is a preset percentage of available bandwidth and has therefore relied on Yin for this feature. In particular, the Examiner argues that Yin teaches "the use of percentage to indicate the total bandwidth allocated, and the total bandwidth available (column 6, lines 38-44)".

Yin is directed to a method and apparatus for controlling admission of connection requests. In brief, a system controls the admission of a connection request based on available resources. The received connection request specifies a particular class of service. The system then determines the allocated bandwidth for the specified class of service. Available resources for the specified class of service are determined based on measured traffic flow and the allocated bandwidth associated with the specified class of service. The connection request is accepted if the available resources are capable of supporting the requested connection.

With regard to the examiner's reliance of Yin to teach a "percentage", column 6, lines 38-44 merely states that various calculations may be used to for each class of service to determine whether or not to accept or reject a connection request. One of the parameters in the calculation may be "B(i)" which is represented a percentage of total bandwidth available to all service classes.

Other than using the word "percentage" Yin is unrelated to Appellant's claimed "limit the amount of additional information to a preset percentage of the available bandwidth".

A. The combination of Ahn, Aras, and Yin does not show prima facie obviousness:

Independent claim 1, and similarly independent claims 8 and 15 recite "limiting the amount of additional information to a preset percentage of the total available bandwidth" and "broadcasting of a portion of the additional information is stopped when the preset percentage is reached". It is respectfully submitted that this is not shown by the combination of Aras, Ahn, and Yin as set forth by the Examiner.

With regard to Aras, Applicant previously successfully argued, that Aras appears to be concerned with ways to forecast or predict future bandwidth availability based on current and past trends. Thus, Aras teaches nothing about determining actual bandwidth utilization nor does Aras teach or suggest "broadcasting additional information using an unused portion of the previously allocated bandwidth" as claimed.

The Examiner has had to additionally rely on Ahn in combination with Aras for teaching determining in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast digitally is actually utilizing all bandwidth. However, as noted above, filling an unfilled frame with interleaved data is not analogous to determining in real time "whether information guaranteed a fixed amount of bandwidth for a fixed length of time" is using its scheduled bandwidth allocation as done by the present invention.

The Examiner has acknowledged that Aras and Ahn do not teach that a stop limit is a preset percentage of available bandwidth and has therefore relied on Yin for this feature. In particular, the Examiner argues that Yin teaches "the use of percentage to indicate the total bandwidth allocated, and the total bandwidth available (column 6, lines 38-44)".

However, Yin, at column 6, lines 38-44 simply uses the phrase "percentage of total bandwidth". If the Board reads further, this refers "percentage of total bandwidth of existing connections available to all service classes". Again, this has nothing to do with Appellant's claimed invention.

In short, Ahn does not appear to teach limiting the amount of additional information broadcast to a percentage of available bandwidth. Aras, while perhaps filling unused frames, does not teach or suggest "determine in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast actually utilizes all bandwidth previously allocated to broadcasting the information" as claimed. Finally, Yin mentions bandwidths and percentages, but does not remotely suggest that the bandwidth percentage may be to limit additional information that may be broadcast and

certainly does not teach or suggest <u>stopping</u> the broadcast of additional information if this limit is exceeded as recited in the independent claims.

It is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. <u>In re Fine</u>, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). This objective can only be established by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. <u>In re Lalu</u>, 747 F.2d 703, 223 U.S.P.Q. 1257 (Fed. Cir. 1988). Here there is none. Indeed, in the case at hand, the Examiner has failed to disregard what he has been taught by the present invention and has failed to cast his mind back to the time that the invention was made to determine what would have been obvious to one ordinarily skilled in the art who had available only the references and the then-accepted wisdom in the art. Assuming arguendo that Aras could be interpreted in the manner suggested by the Examiner, the rejection would still be insufficient since as a matter of fact Aras, Ahn, and Yin fail to teach the above highlighted claim recitations.

The PTO has the initial burden under section 103 to establish a *prima facie* case of obviousness. See, <u>In re Piasecki</u>, 223 USPQ 785, 788; <u>In re Fine</u>, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. <u>In re Lalu</u>, supra; see also, <u>Ashland Oil, Inc. V. Delta Resins & Refractories</u>, Inc., 776 F.2d 281, 297 n.24, 227 USPQ 657, 667 n.24 (Fed. Cir. 1985); <u>ACS Hosp. Sys., Inc. v.</u>

<u>Monteviore Hosp.</u>, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). Here, it is respectfully submitted that the Examiner has failed to show prima facie obviousness. As such, it is respectfully requested that the Board reverse the Examiner and allow all claims.

CONCLUSION

In summary, what the Examiner has done is attempted to construct the claimed invention from the referenced patents with no independent teaching for the construction he proposes. Appellants have solved a fundamental problem in the area of bandwidth management. Appellant's invention is simply not suggested by the prior art and, therefore, Appellants are entitled to protection sought by the rejected claims.

Appellants thus respectfully submit that the rejections of the claims are in error and that reversal is warranted in this case.

Respectfully submitted,

/Kevin A. Reif/

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on:

8 DECEMBER 2004
Date of Deposit

DEBORAH L. HIGHAM
Name of Person Mailing Correspondence

12-8-04
Signature   Date

CLAIMS APPENDIX

A copy of the claims involved in the appeal is provided below.

1 (Previously Amended).   A method comprising:

determining in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast digitally is actually utilizing all bandwidth previously allocated to broadcasting the information;

if not, broadcasting additional information using an unused portion of the previously allocated bandwidth;

limiting the amount of additional information to a preset percentage of the total available bandwidth,

wherein said broadcasting of a portion of the additional information is stopped when the preset percentage is reached.

2. (Cancelled).

3. (Original)   The method of claim 1 including determining in real-time whether additional information can be broadcast over a portion of the previously allocated bandwidth that is actually unused.

4 (Cancelled).

5. (Previously Amended)   The method of claim 1 wherein said broadcasting the portion of the additional information to be stopped is selected based upon at least one of content provider, bandwidth range and sequence of content provision.

6. (Previously Presented)   The method of claim 1 including determining in real-time whether there is any unallocated bandwidth; and, if there is unallocated bandwidth with respect to a particular timeframe, broadcasting supplementary information to occupy at least a portion of the unallocated bandwidth during the particular timeframe.

7. (Original)   The method of claim 6 including determining in advance of the particular timeframe whether the supplementary information can be broadcast over the unallocated bandwidth.

8. (Previously Amended)   A digital communication system comprising:

an automated management system that controls scheduling of digital broadcasts, and is configured to determine in real time whether information guaranteed a fixed amount of bandwidth for a fixed length of time broadcast actually utilizes all bandwidth previously allocated to broadcasting the information, and if not, to broadcast additional information using an unused portion of the previously allocated bandwidth,

wherein the automated management system is configured to limit the amount of additional information to a preset percentage of the total available bandwidth,

wherein the automated management system is configured to stop the broadcast of a portion of the additional information when the preset percentage is reached.

9. (Cancelled).

10. (Original) The digital communication system of claim 8 wherein the automated management system is configured to determine whether additional information can be broadcast over a portion of the previously allocated bandwidth that is actually unused.

11 (Cancelled).

12. (Previously Amended)   The digital communication system of claim 8 wherein the system is configured to select the portion of the additional information to be stopped based on at least one of content provider, bandwidth range, and sequence of content provision.

13. (Original) The digital communication system of claim 8 wherein the automated management system is configured to determine whether there is any unallocated bandwidth; and, if there is unallocated bandwidth with respect to a particular timeframe, the system is configured to broadcast supplementary information to occupy at least a portion of the unallocated bandwidth during the particular timeframe.

14. (Original) The digital communication system of claim 13 wherein the automated

management system is configured to determine in advance of the particular timeframe

whether the supplementary information can be broadcast over the unallocated bandwidth.

15. (Previously Amended)   An article comprising a computer-readable medium which

stores computer-executable instructions for causing a computer system to:

determine in real time whether information guaranteed a fixed amount of

bandwidth for a fixed length of time broadcast over a digital network is actually utilizing

all bandwidth previously allocated to broadcasting the information;

if not, broadcast additional information using an unused portion of the previously

allocated bandwidth;

limit the amount of additional information to a preset percentage of the available

bandwidth; and

stop broadcasting a portion of additional information when the preset percentage

is reached.

16 (Cancelled).

17. (Original) The article of claim 15 which further stores instructions that cause the

computer system to determine whether additional information can be broadcast over a

portion of the previously allocated bandwidth that is actually unused.

18 (Cancelled).

19. (Previously Amended)   The article of claim 15 which further stores instructions that cause a computer to stop broadcasting a portion of the additional information and wherein the portion of the additional information is selected based on at least one of content provider, bandwidth range and sequence of content provision.

20. (Original) The article of claim 15 which further stores instructions that cause a computer to determine in real-time whether there is any unallocated bandwidth; and, if there is unallocated bandwidth with respect to a particular timeframe, broadcasting supplementary information to occupy at least a portion of the unallocated bandwidth during the particular timeframe.

21-24. (Cancelled).

EVIDENCE APPENDIX

This section lists evidence submitted pursuant to 35 U.S.C. §§1.130, 1.131, or

1.132, or any other evidence entered by the Examiner and relied upon by Appellant in

this appeal, and provides for each piece of evidence a brief statement setting forth where

in the record that evidence was entered by the Examiner. Copies of each piece of

evidence are provided as required by 35 U.S.C. §41.37(c)(ix).

NO.	EVIDENCE	BRIEF STATEMENT SETTING FORTH WHERE IN THE RECORD THE EVIDENCE WAS ENTERED BY THE EXAMINER
1	N/A	N/A

RELATED PROCEEDINGS APPENDIX

Pursuant to 35 U.S.C. §41.37(c)(x), copies of the following decisions rendered by a court of the Board in any proceeding identified above under 35 U.S.C. §41.37(c)(1)(ii) are enclosed herewith.

NO.	TYPE OF PROCEEDING	REFERENCE NO.	DATE
1	N/A	N/A	N/A
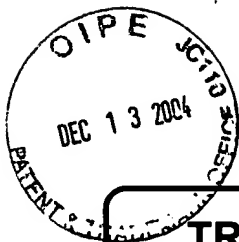
TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application No.	09/541,390
Filing Date	March 31, 2000
First Named Inventor	Lynice S. Spangler
Art Unit	2155
Examiner Name	Liang Che A. Wang

Total Number of Pages in This Submission		Attorney Docket Number	42390P7987

ENCLOSURES *(check all that apply)*

☒ Fee Transmittal Form

   ☒ Fee Attached

☐ Amendment / Response

   ☐ After Final
   ☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☐ Information Disclosure Statement

   ☐ PTO/SB/08

☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/ Incomplete Application

   ☐ Basic Filing Fee

   ☐ Declaration/POA

   ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

☐ Drawing(s)

☐ Licensing-related Papers

☐ Petition

☐ Petition to Convert a Provisional Application

☐ Power of Attorney, Revocation Change of Correspondence Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s)

Remarks

☐ After Allowance Communication to Group

☐ Appeal Communication to Board of Appeals and Interferences

☒ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☒ Other Enclosure(s) *(please identify below):*

- Appeal Brief (21 pgs)
- Check for $500.00
- Return Receipt Postcard

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Paul A. Mendonsa, Reg. No. 42,879 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	*[signature]*
Date	December 8, 2004

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	Deborah L. Higham		
Signature	*[signature]*	Date	December 8, 2004

FEE TRANSMITTAL
for FY 2004
Effective 10/01/2004. Patent fees are subject to annual revision.

Complete if Known	
Application Number	09/541,390
Filing Date	March 31, 2000
First Named Inventor	Lynice S. Spangler
Examiner Name	Liang Che A. Wang
Art Unit	2155
Attorney Docket No.	42390P7987

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT	($) 500.00

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None
☐ Deposit Account

Deposit Account Number: 02-2666

Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below   ☒ Credit any overpayments

☒ Charge any additional fee(s) or underpayment of fees as required under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20.

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1001	790	2001	395	Utility filing fee	
1002	350	2002	175	Design filing fee	
1003	550	2003	275	Plant filing fee	
1004	790	2004	395	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($)

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims	14 - 24* =	0	X	18.00 =	$0.00
Independent Claims	3 - 5* =	0	X	88.00 =	$0.00
Multiple Dependent				=	

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	
1202	18	2202	9	Claims in excess of 20	
1201	88	2201	44	Independent claims in excess of 3	
1203	300	2203	150	Multiple Dependent claim, if not paid	
1204	88	2204	44	**Reissue independent claims over original patent	
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) ($) 0.00

**or number previously paid, if greater, For Reissues, see below

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity			
Fee Code	Fee ($)	Fee Code	Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	430	2252	215	Extension for reply within second month	
1253	980	2253	490	Extension for reply within third month	
1254	1,530	2254	765	Extension for reply within fourth month	
1255	2,080	2255	1,040	Extension for reply within fifth month	
1404	340	2401	170	Notice of Appeal	
1402	340	2402	170	Filing a brief in support of an appeal	500.00
1403	300	2403	150	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,370	2453	685	Petition to revive - unintentional	
1501	1,370	2501	685	Utility issue fee (or reissue)	
1502	490	2502	245	Design issue fee	
1503	660	2503	330	Plant issue fee	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 500.00

SUBMITTED BY

		Complete (if applicable)		
Name (Print/Type)	Paul A. Mendonsa	Registration No. (Attorney/Agent)	42,879	Telephone (503) 439-8778
Signature			Date	12/08/04

Based on PTO/SB/17 (10-03) as modified by Blakely, Solokoff, Taylor & Zafman (wir) 02/10/2004.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450